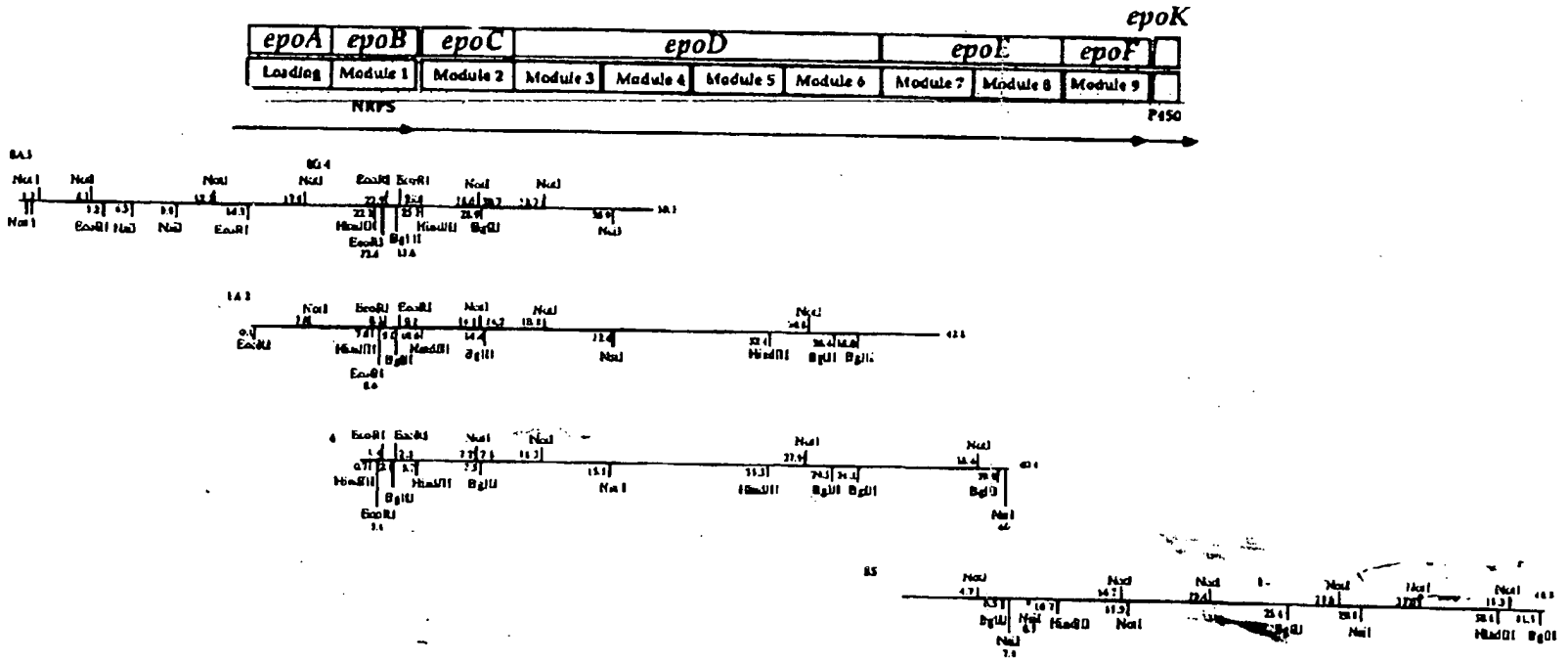
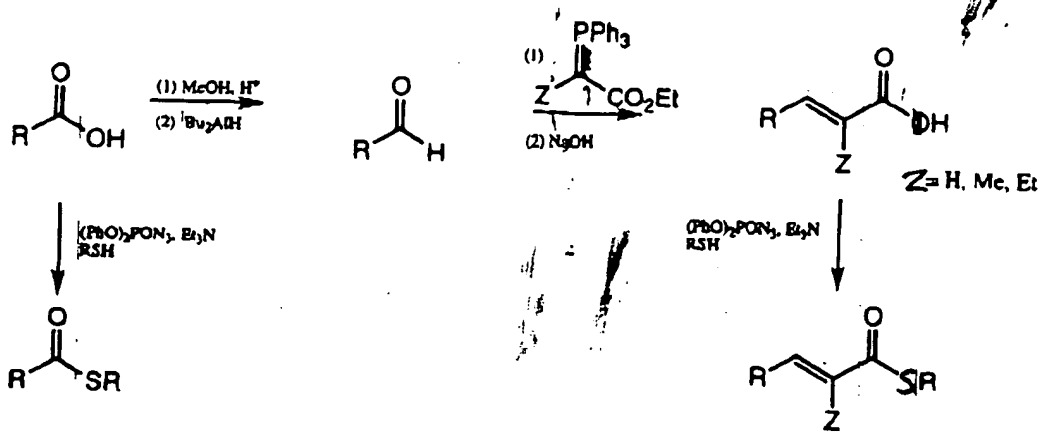

epoK
epoA
epoB
epoC
epoD
epoE
epoF
Loading
Module 1
Module 2
Module 3
Module 4
Module 5
Module 6
Module 7
Module 8
Module 9
NRPS
PKS

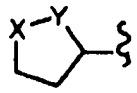
Figure 1

Figure 2

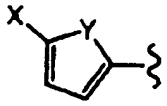
Alternative Primers for Biosynthetic Epothilone Analogs



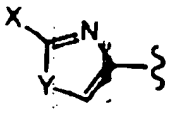
R =



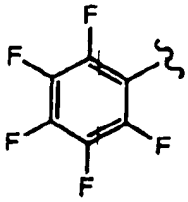
X = CH_2, O, S
Y = CH_2, O, S

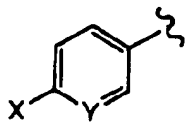


X = H, Me, Et, CH_2OH, Br
Y = O, S

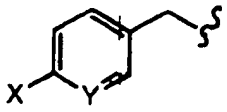


X = H, Me, Et, Br, OH
Y = NH, O,

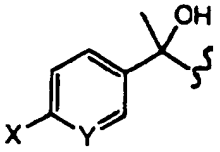




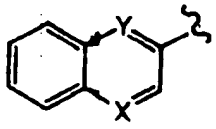
X = NO_2, CN, Me, O-alkyl, halo, etc.
Y = CH, N



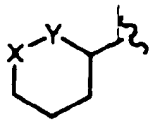
X = NO_2, CN, alkyl, aryl, halo, O-alkyl, etc.
Y = CH, N



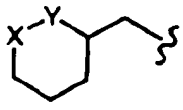
X = NO_2, CN, alkyl, aryl, halo, O-alkyl, etc.
Y = CH, N



X = CH, N
Y = CH, N

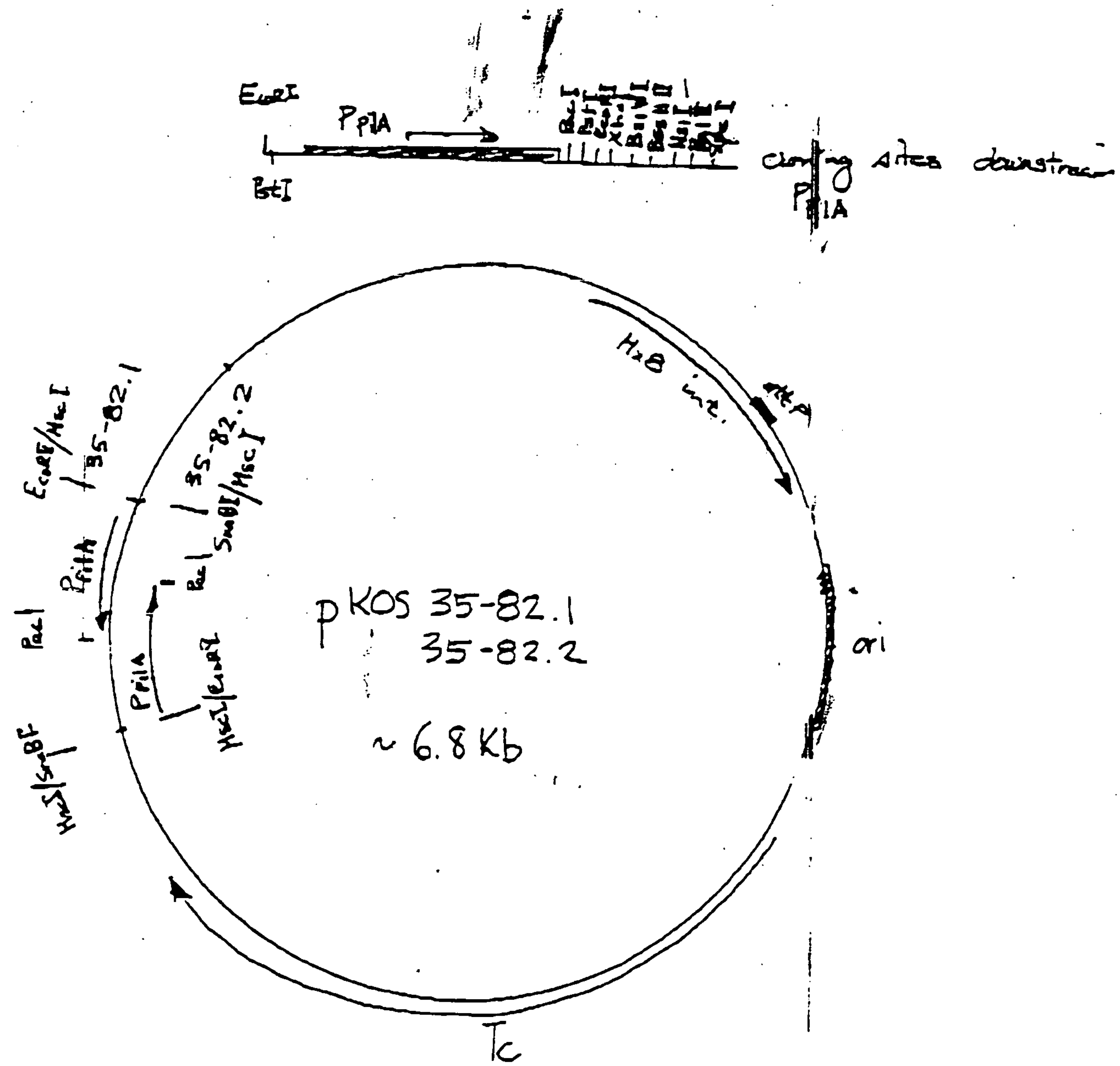


X = CH_2, O, S, NH, N-alkyl, N-aryl
Y = CH_2, O, S, NH, N-alkyl, N-aryl



X = CH_2, O, S, NH, N-alkyl, N-aryl
Y = CH_2, O, S, NH, N-alkyl, N-aryl

Figure 3



EcoRI
PstI
cloning sites downstream
pKOS 35-82.1
35-82.2
~6.8 Kb
Tc
ori
35-82.1
35-82.2

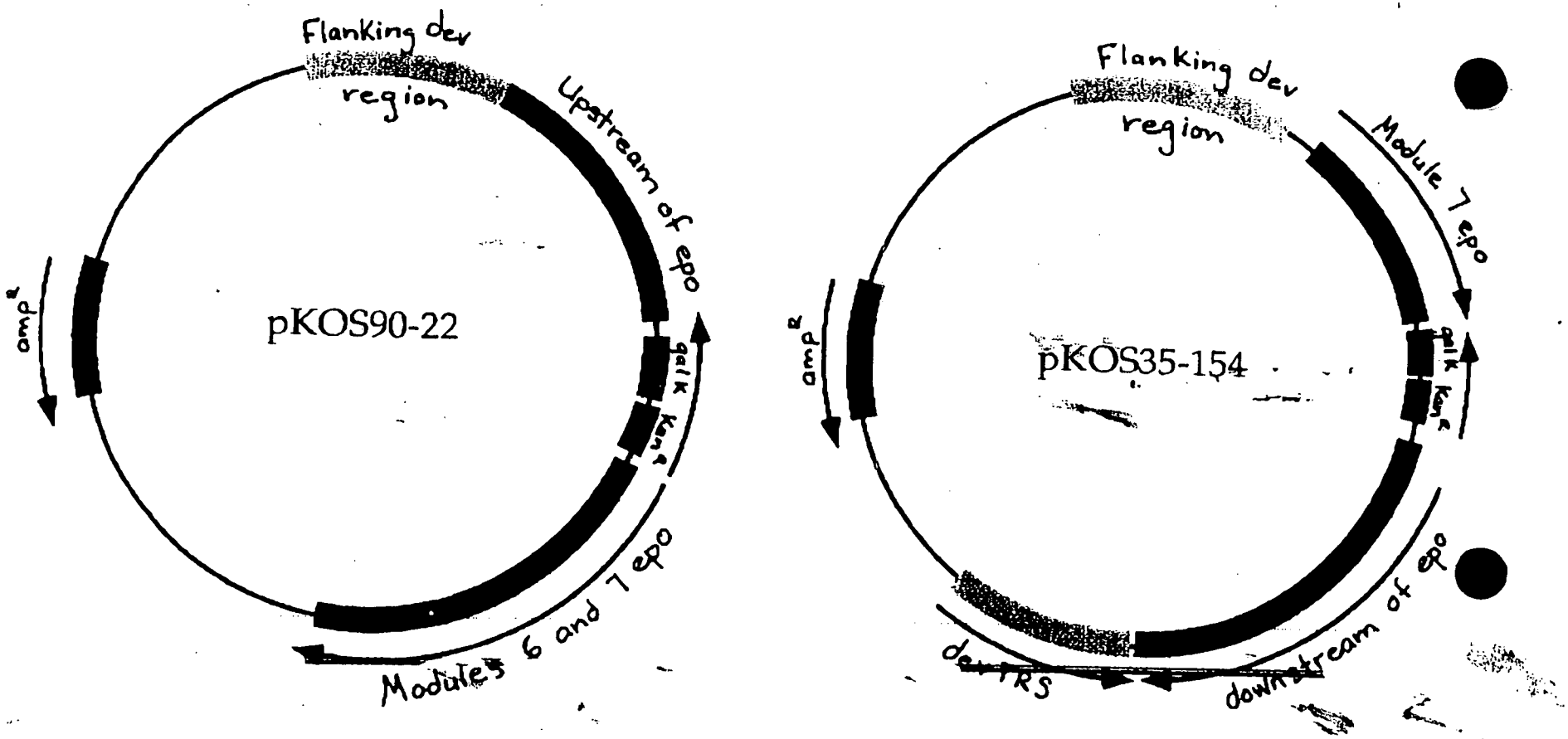

Flanking dev region
Upstream of epo
pKOS90-22
amp^R
galk kan^r
Module 6 and 7 epo
Flanking dev region
Module 7 epo
pKOS35-154
amp^R
galk kan^r
dev TRS
downstream of epo

Figure 4

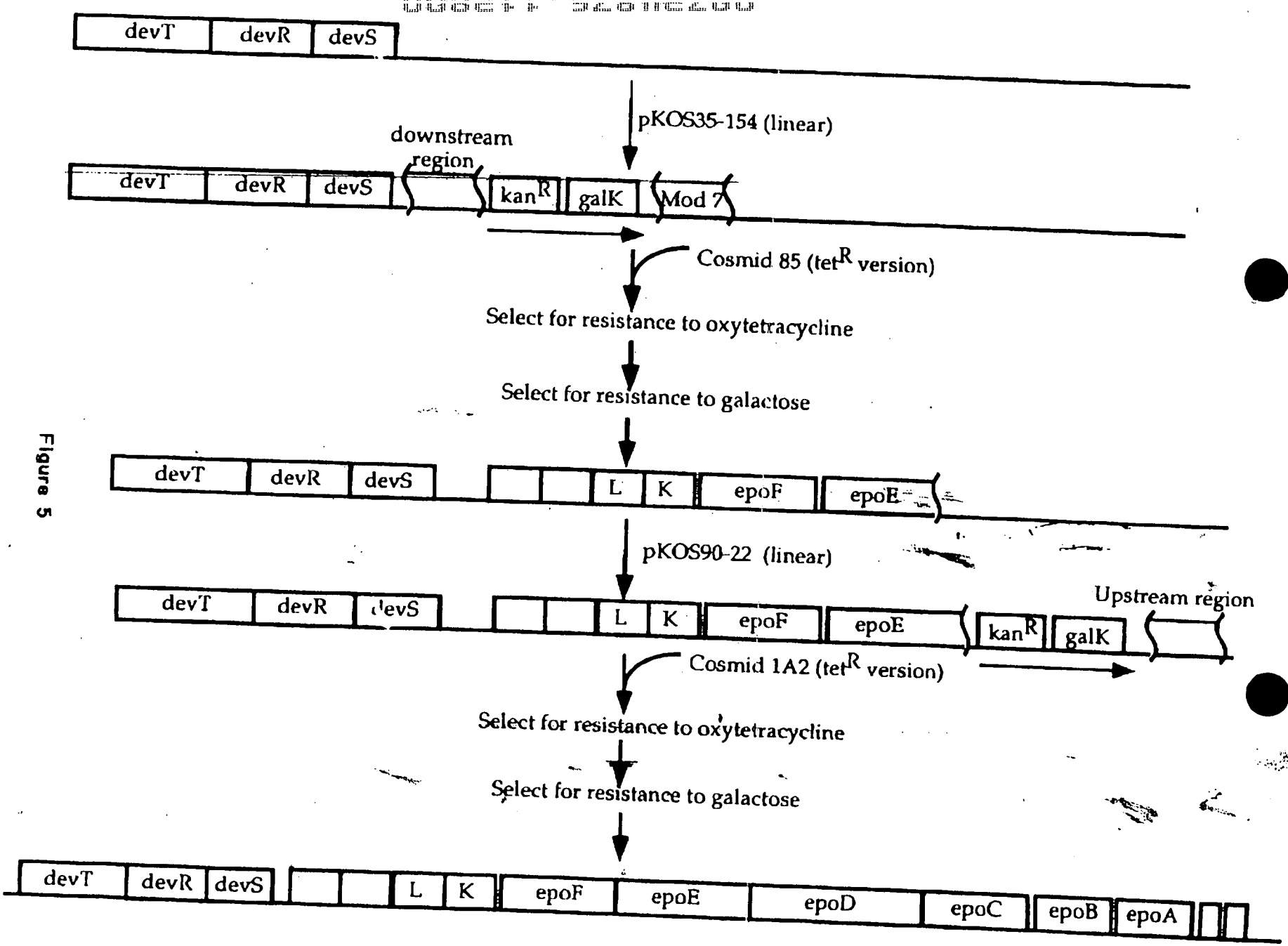
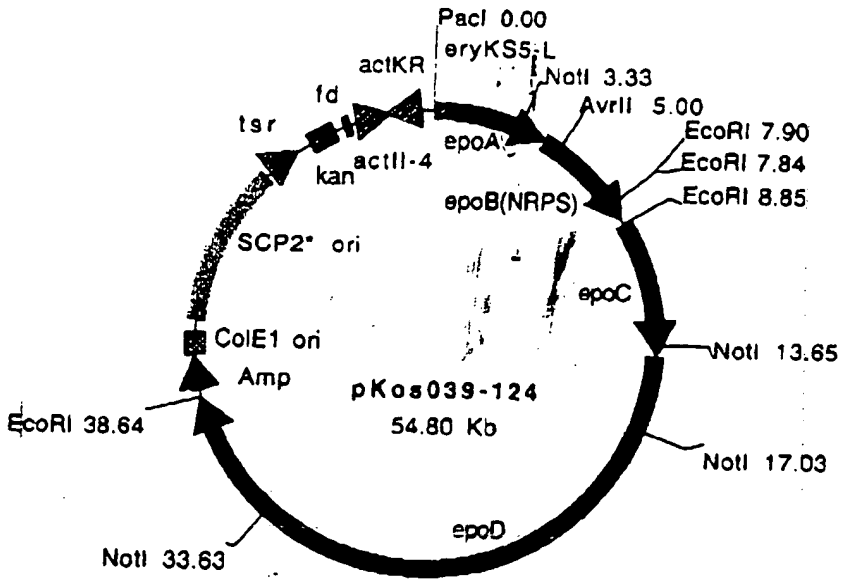
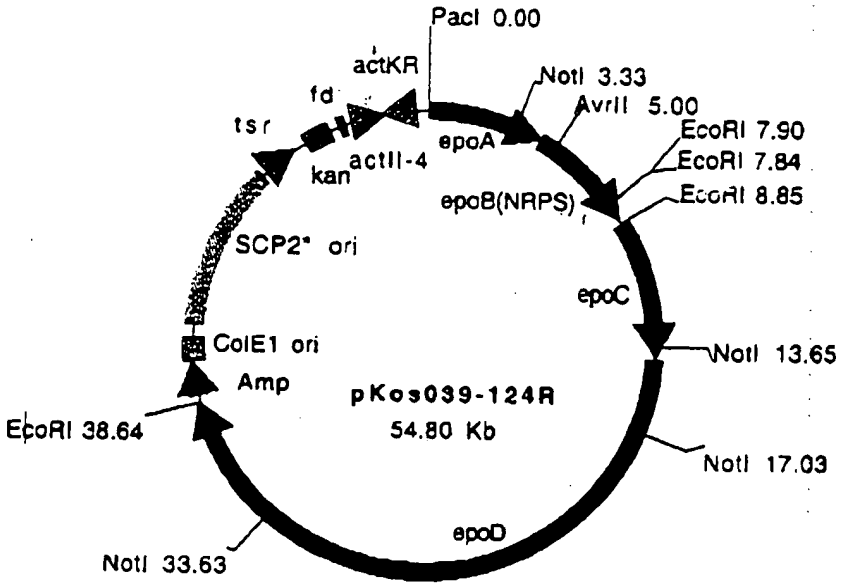


Figure 5

Figure 6


PacI 0.00
eryKS5-L
actKR
fd
tsr
kan
actII-4
NotI 3.33
AvrII 5.00
EcoRI 7.90
EcoRI 7.84
EcoRI 8.85
epoA
epoB(NRPS)
epoC
NotI 13.65
NotI 17.03
epoD
NotI 33.63
EcoRI 38.64
ColE1 ori
Amp
SCP2* ori
pKos039-124
54.80 Kb


PacI 0.00
actKR
fd
tsr
kan
actII-4
NotI 3.33
AvrII 5.00
EcoRI 7.90
EcoRI 7.84
EcoRI 8.85
epoA
epoB(NRPS)
epoC
NotI 13.65
NotI 17.03
epoD
NotI 33.63
EcoRI 38.64
ColE1 ori
Amp
SCP2* ori
pKos039-124R
54.80 Kb

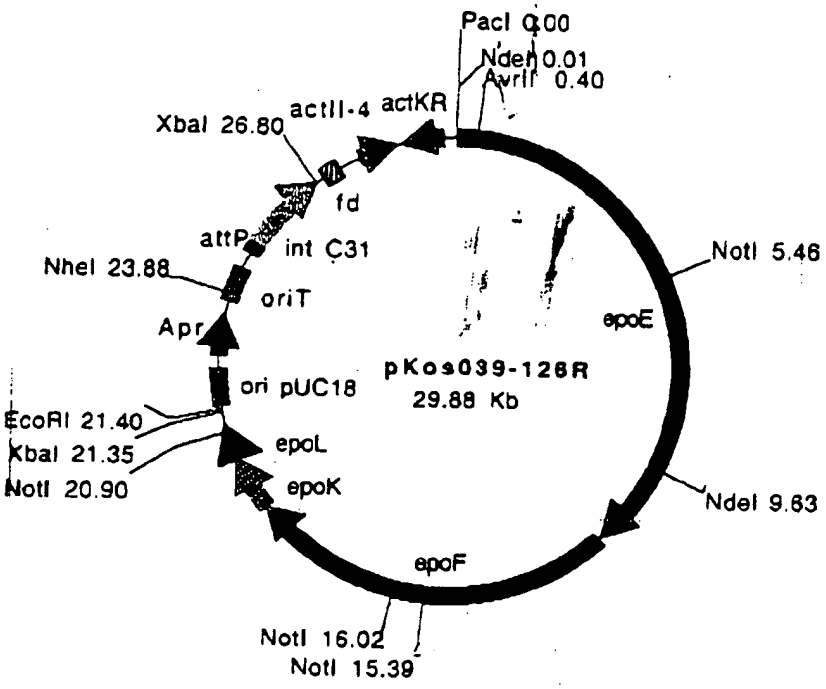

PacI 0.00
NdeI 0.01
AvrII 0.40
actII-4
actKR
XbaI 26.80
fd
attP
int C31
NheI 23.88
oriT
Apr
ori pUC18
pKos039-126R
29.88 Kb
NotI 5.46
epoE
EcoRI 21.40
XbaI 21.35
NotI 20.90
epoL
epoK
NdeI 9.63
epoF
NotI 16.02
NotI 15.39

Figure 7

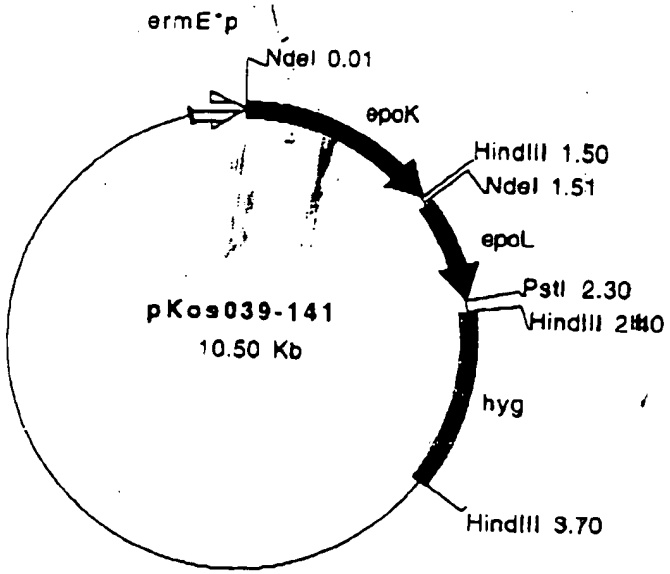
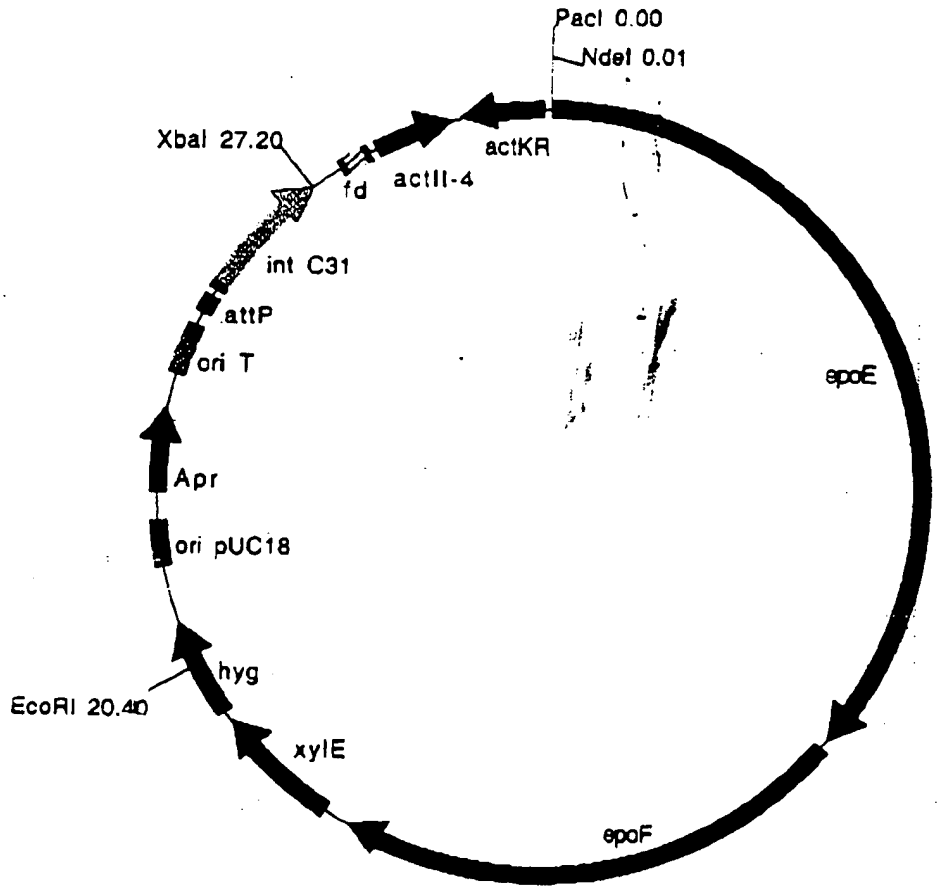

ermE*p
NdeI 0.01
epoK
HindIII 1.50
NdeI 1.51
epoL
PstI 2.30
HindIII 2.40
pKos039-141
10.50 Kb
hyg
HindIII 3.70

Figure 8



pKos045-12
30.40 Kb

Figure 9